AMENDMENTS TO THE CLAIMS

Please **AMEND** claims 1, 14-15, 21, 22, 25 and 38 as shown below.

The following is a complete list of all claims in this application.

1. (Currently Amended) A green carbon foam comprising: [[A]]

an open-celled structure produced by heating high volatile bituminous coal particles in a pressure controlled reactor above about 300°C, under a pressurized non-oxidizing atmosphere having a pressure from about 50 to about 500 psi, wherein said carbon foam has a density ranging from about 0.1 to about 0.8 g/cm^3.

2. (Previously Presented) The carbon foam of claim 1 wherein said coal exhibits a free swell index ranging from about 3.5 to about 5.0.

3. (Previously Presented) The carbon foam of claim 2 having a compressive strength below about 6000 psi.

4. (Previously Presented) The carbon foam of claim 2 that has been further carbonized.

5. (Previously Presented) The carbon foam of claim 2 that has been further graphitized.

6. (Previously Presented) A method for producing a green carbon foam from a high volatile bituminous coal comprising:

placing high volatile bituminous coal particles in a pressure controlled mold; and

heating said high volatile bituminous coal particles under a pressurized non-oxidizing atmosphere ranging from about 50 to about 500 psi to a temperature ranging from about 300° C to about 700° C.

7. (Previously Presented) The method of claim 6 wherein said high volatile bituminous coal exhibits a free swell index ranging from about 3.5 to about 5.0.

8. (Cancelled)

9. (Previously Presented) The method of claim 7 wherein said temperature is achieved using a heat-up rate ranging from about 1° C to about 20° C per minute.

10. (Previously Presented) The method of claim 7 wherein said controlled cooling is accomplished at a rate of less than about 10° C/min to a temperature of about 100° C.

11. (Previously Presented) A laminated sheet comprising:

a green carbon foam core having a surface, wherein said carbon foam is produced from particulate high volatile bituminous coal and has a density ranging from about 0.1 to about 0.8 g/cm^3; and

a sheet laminated to said carbon foam surface.

12. (Previously Presented) The laminated sheet of claim 11 wherein said coal exhibits a free swell index ranging from about 3.5 to about 5.0.

13. (Previously Presented) The laminated sheet of claim 12 wherein said sheet comprises a material selected from the group consisting of aluminum, steel, polymer sheet, inconel, titanium, refractory metals, fiber reinforced polymer sheet and paper.

14. (Currently Amended) The laminated sheet ~~product~~ of claim 12 wherein said carbon foam core has been further carbonized.

15. (Currently Amended) The laminated sheet ~~product~~ of claim 12 wherein said carbon foam core is further graphitized.

16. (Previously Presented) The carbon foam of claim 1, wherein said high volatile bituminous coal contains from about 35% to about 45% by weight of volatile matter.

17. (Previously Presented) The carbon foam of claim 1 wherein said high volatile bituminous coal has a Gieseler initial softening temperature above about 380° C.

18. (Previously Presented) The carbon foam of claim 17 wherein said high volatile bituminous coal has a Gieseler initial softening temperature from about 380° C to about 400° C.

19. (Previously Presented) The carbon foam of claim 1, wherein said high volatile bituminous coal has a plastic range of at least about 50° C.

20. (Previously Presented) The carbon foam of claim 19 wherein said high volatile bituminous coal has a plastic range of from about 75° C to about 100° C.

21. (Currently Amended) The carbon foam of claim 1, wherein said high volatile bituminous coal has a maximum fluidity of at least 300 ~~hundred~~ ddpm as determined by ASTM D2639.

22. (Currently Amended) The carbon foam of claim 21 wherein said high volatile bituminous coal has a maximum fluidity of more than 2000 ddpm as determined by ASTM D2639.

23. (Previously Presented) The carbon foam of claim 1, wherein said high volatile bituminous coal exhibits an expansion of at least about 20% as determined by Arnu dilatation.

24. (Previously Presented) The carbon foam of claim 23 wherein said high volatile bituminous coal exhibits an expansion of at least about 100% as determined by Arnu dilatation.

25. (Currently Amended) The carbon foam of claim 1, wherein said high volatile bituminous coal comprises:

from about 50 to about 60% by weight of fixed carbon;

less than about 30% by weight inert maceral material;

exhibits a vitrinite reflectance in the range of from about 0.80 ~~and~~ to about 0.95 as determined by ASTM D2798; and

exhibits 0.0 volume % moderate or severe oxidation as determined by ASTM D2798.

26. (Previously Presented) The carbon foam of claim 1 having a density ranging from about 0.2 g/cm^3 to about 0.6 g/cm^3.

27. (Previously Presented) The carbon foam of claim 1 having a density ranging from about 0.3 g/cm^3 to about 0.4 g/cm^3.

28. (Previously Presented) The method of claim 6 wherein said high volatile bituminous coal contains from about 35% to about 45% by weight of volatile matter.

29. (Previously Presented) The method of claim 28 wherein said high volatile bituminous coal has a Gieseler initial softening temperature above about 380° C.

30. (Previously Presented) The method of claim 29 wherein said high volatile bituminous coal has a Gieseler initial softening temperature ranging from about 380° C to about 400° C.

31. (Previously Presented) The method of claim 6 wherein said high volatile bituminous coal has a plastic range of at least about 50° C.

32. (Previously Presented) The method of claim 31 wherein said high volatile bituminous coal has a plastic range of from about 75° C to about 100° C.

33. (Previously Presented) The method of claim 31 wherein said high volatile bituminous coal has a maximum fluidity of at least 300 ddpm as determined by ASTM D2639.

34. (Previously Presented) The method of claim 31 wherein said high volatile bituminous coal has a maximum fluidity of more than 2000 ddpm as determined by ASTM D2639.

35. (Previously Presented) The method of claim 31 wherein said high volatile bituminous coal exhibits an expansion of at least about 20% as determined by Arnu dilatation.

36. (Previously Presented) The method of claim 35 wherein said high volatile bituminous coal exhibits an expansion of at least about 100% as determined by Arnu dilatation.

37. (Previously Presented) The method of claim 35 wherein said high volatile bituminous coal comprises:

from about 50 to about 60% by weight of fixed carbon;

less than about 30% by weight inert maceral material;

exhibits a vitrinite reflectance in the range of from about 0.80 to about 0.95 as determined by ASTM D2798; and

exhibits 0.0 volume % moderate or severe oxidation as determined by ASTM D2798.

38. (Currently Amended) The method of claim 6 wherein said carbon foam has a density [[of]] ranging from about 0.2 g/cm^3 to about 0.6 g/cm^3.

39. (Previously Presented) The method of claim 6 wherein said carbon foam has a density ranging from about 0.3 g/cm^3 to about 0.4 g/cm^3.

40. (Previously Presented) The carbon foam of claim 1, wherein said carbon foam has a thermal conductivity below about 1 W/m K.

Claims 41-44 (Cancelled)